

# Linde AG

## Germany, Specialty Chemicals


**A+** STABLE

### Corporate profile

Linde AG is an integrated industrial gases and engineering company whose foundation goes back to inventor and founder Carl von Linde in 1879. The conglomerate formerly consisted of gases, material handling and refrigeration divisions, until the latter two were divested in 2006 and 2004, respectively. After acquiring two industrial gases companies, Sweden's AGA in 1999 and the UK's BOC in 2006, Linde is now one of the four leading suppliers of industrial gases worldwide. It is active in about 100 countries in the gas segments of healthcare, onsite, bulk and cylinders. Its engineering division focuses, among other activities, on air separation and hydrogen/syngas plants built on customer premises (onsite) in order to supply major customers locally; gases produced at these sites are also supplied to other gas activities. The gases division generated about 86% of group revenues and 95% of EBITDA in 2017. This report on Linde AG, including our projections, are done on a stand-alone basis, ie without the planned merger with Praxair.

### Key metrics

Scope credit ratios	Scope estimates			
	2016	2017F	2018F	2019F
EBITDA/ interest cover (x)	11.8x	13.8x	16.6x	17.1x
Scope-adjusted debt (SaD)/ EBITDA	2.0x	1.8x	1.8x	1.5x
Scope-adjusted FFO/ SaD	40%	45%	46%	53%
FOCF/ SaD	18%	25%	25%	17%

### Rating rationale

**Scope Ratings affirms its issuer rating of A+ to Germany-based Linde AG (Linde). The short-term rating is S-1+. The rating Outlook is Stable.**

The rating affirmation reflects Scope's view of the group's very credit-supportive business risk profile, owing to the industrial gases industry's limited cyclicity and high degree of protection, as well as Linde's strong market position as one of the four leading global suppliers of gases. The ratings also reflect our view of group management's extremely conservative financial policy and high commitment to the ratings assigned.

In Scope's assessment, the ratings are underpinned by the very stable and resilient industrial gases industry, evidenced by its limited historical cyclicity. In 2009, the global gases industry declined at only a single-digit rate, significantly less than more cyclical sectors such as automotive. In our view, this is because industrial gases are firmly embedded inputs in many industrial production processes and involve long-term contracts with take-or-pay conditions – a stabilising element in recessions. Customers generally tend to be loyal and more interested in an uninterrupted working supplier relationship, namely, maintaining service at all times. This relationship will usually not be compromised for the sake of a marginally lower price from a competitor. In addition, we believe there are significant entry barriers to potential newcomers in the form of know-how, capital resources and 'regional ownership'. It thus makes little sense for a potential new entrant to build a new plant next to a competitor's existing facility.

### Ratings & Outlook

Corporate ratings	A+/Stable
Short-term rating	S-1+
Senior unsecured rating	A+

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### Related methodology

Corporate Rating Methodology,  
January 2018

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We believe Linde's competitive position supports the ratings even more strongly than the benefits afforded by the industrial gases industry. This is explained by Linde's dominant market positions in many countries and regions as well as across product groups. Linde is one of the four global 'gas majors', with significant market shares not only in Europe but also 'away from home', thereby differentiating it in particular from its global US-based peers Praxair Inc. and Air Products and Chemicals Inc. The last two points are directly linked to our diversification-related rating driver, which we assess as very strong in the context of Linde's ratings. Furthermore, Scope believes the company's competitive position also benefits from stable and comparatively high EBITDA margins of between 25% and 30% in the gases division, enabling consistent and strong free cash flow generation. Given the above factors we rate Linde's business risk profile as AA- which is extremely supportive for the ratings.

In 2017, solid underlying growth rates in most of the group's industrial gases business (except for healthcare) as well as its engineering division generated rising operating profit and cash flows. Group EBITDA before restructuring and Praxair-integration costs of EUR 373m in total increased by 2.8% year-on-year and group operating cash flow rose by 2.3%, on a year-on-year basis. Sales growth in the gases division was strong in Europe and Asia-Pacific, benefitting from robust economic activity in the regions although it suffered, especially in North America, from significant pricing pressure due to competitive bidding in the US healthcare market.

Linde's financial risk profile reflects our perception of management's very conservative financial and liquidity policies. In addition, key credit metrics have been improving since 2012 – the year of the Lincare acquisition – and we expect further upside in the next two years based on the group's capacity to generate stable and sizeable annual free cash flows of about EUR 700m after dividends and interest. This will enable further deleveraging, which should not be endangered even in times of relatively low revenue growth. Group sales increased by 2.1% in 2017, foreign-exchange adjusted (the gases division's revenues rose by 1.2% and 4.3% – on a currency, as well as natural gas-price adjusted basis - excluding healthcare, which was heavily affected by price declines due to competitive bidding in the US healthcare market), while group EBITDA after restructuring and merger-related costs was down by about 3% at EUR 3.8bn. Scope projections for 2018 reflect no progress on deleveraging. This is mainly due to the increased dividend payment of about EUR 1.4bn (compared to a normalised level of about EUR 800m), which can be explained by merger-related requirements to place Linde shareholders in the same position as their Praxair counterparts who will already have received three-quarters of the 2018 dividend at close of the transaction. In our seemingly less likely standalone case projections, we therefore assume further progress on deleveraging in 2019, based on operating progress supported by no further restructuring/ merger-related charges (EUR 373m in 2017 and EUR 200m estimated by Scope for 2018).

As the likely merger with Praxair Inc. still needs to be cleared by regulators in a drawn-out timeline stretching into the second half of 2018, we are not in a position to reflect the transaction in the rating yet. The transaction deadline specified by both companies in the merger documentation is 24 October 2018. In addition, while existing ratings relate to Linde AG, the new Ireland-based holding company's management will need to decide on that entity's choice of rating agencies.

## Outlook

The Stable Outlook reflects Scope's expectation that Linde's financial risk profile will continue to improve as it did in 2017. Specifically, Scope views credit metrics commensurate with a low A category to be in line with the corporate ratings, as indicated by FFO/ Scope-adjusted debt of about 40% and Scope-adjusted-debt/ EBITDAR of about 2x. In general, we believe any potential future rating changes will be triggered by Linde's financial risk profile, as the company's business risk profile has a higher rating and is deemed to be very stable.

A higher rating could be triggered by a sustainable improvement in the credit metrics detailed above. A negative rating action could be the result of a more aggressive financial policy or a sustained negative deviation from ratios commensurate with the present ratings.

## Rating drivers

Positive rating drivers	Negative rating drivers
<ul style="list-style-type: none"> <li>• Credit-supportive industry risk, given its limited cyclicalities (even in times of extreme crisis) and high entry barriers, coupled with low substitution risk</li> <li>• Very strong competitive position, reflecting Linde's high and stable operating margins, very large degree of diversification and global position as one of only four industrial gases producers with a strong international market position</li> <li>• High and recurring operating profits enable consistent and high free cash flow generation</li> <li>• Conservative financial policy</li> <li>• Extremely conservative liquidity policy</li> </ul>	<ul style="list-style-type: none"> <li>• Comparatively lower growth realisation than some peers</li> </ul>

## Rating-change drivers

Positive rating-change drivers	Negative rating-change drivers
<ul style="list-style-type: none"> <li>• Significant improvement in credit metrics</li> </ul>	<ul style="list-style-type: none"> <li>• Sustained free cash flow drain as a result of lower margins, leading to a strong deterioration in credit metrics</li> <li>• Change to more aggressive financial policy</li> </ul>



## Financial overview

			Scope estimates	
Scope credit ratios	2016	2017	2018F	2019F
EBITDAR/ interest cover (x)	11.8x	13.8x	16.6x	17.1x
SaD/ EBITDAR	2.0x	1.8x	1.8x	1.5x
Scope-adjusted FFO/ SaD	40%	45%	46%	53%
FOCF/ SaD	18%	25%	25%	17%
Scope-adjusted EBITDA in EUR m	2016	2017	2018F	2019F
EBITDA	3,972	3,840	4,084	4,330
Operating lease payment in respective year	131	119	140	140
Other	0	0	0	0
Scope-adjusted EBITDAR	4,103	3,959	4,224	4,471
Scope funds from operations in EUR m	2016	2017	2018F	2019F
EBITDA	4,103	3,959	4,224	4,471
less: (net) cash interest as per cash flow statement	-347	-300	-287	-200
less: cash tax paid as per cash flow statement	-446	-453	-550	-600
Other	0	0	0	0
Scope funds from operations	3,310	3,206	3,387	3,671
Scope-adjusted debt in EUR m	2016	2017	2018F	2019F
Reported gross financial debt	8,602	8,073	8,400	8,000
less: cash, cash equivalents	-1,594	-2,055	-2,181	-2,397
Cash not accessible	200	200	200	200
add: pension adjustment	613	500	515	616
add: operating lease obligation	441	408	472	472
Other	0	0	0	0
Scope-adjusted debt	8,263	7,127	7,406	6,891

## Business risk profile

### Industry

#### Defensive characteristics

Scope's rating reflects our positive perception of the defensive characteristics inherent in Linde's business risk profile. This is supported by our evaluation of the company's underlying industry and market position. It also incorporates our view of the generally long-term contracts with minimum-volume offtake clauses which Linde has as a standard contractual clause, as well as the less pronounced price elasticity of demand in the industrial gases industry compared to other sectors.

#### Low-risk industry

We view the industrial gases industry as relatively stable and protected by high entry barriers. While industrial production appears a valid proxy for gases demand, indicating high cyclical exposure, severe macroeconomic downturns are usually mitigated for industrial gases suppliers by multi-year contracts and minimum volume off-take requirements. Thus, even the severe downturn in 2009 only led to a single-digit decline in this industry's revenues, compared to more than 30% for cyclical sectors such as automotive. We also view entry barriers as high due to relatively large capital requirements for the building of networks and plant infrastructure, as well as the industry's consolidated structure.

The combination of the three industry risk drivers, in accordance with our Corporate Ratings Methodology, results in an industry risk for Linde of A+.

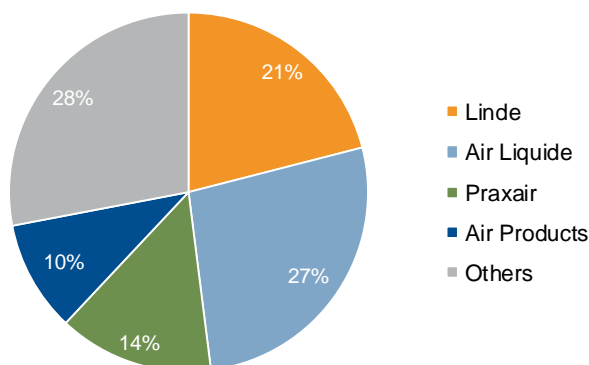
#### Excellent competitive position

In Scope's opinion, Linde continues to hold an excellent competitive position in a credit-supportive underlying industry. This is based on our assessment of the three drivers which make up Scope's evaluation of competitive position: market share, diversification and operating margins.

#### Linde among top four global suppliers

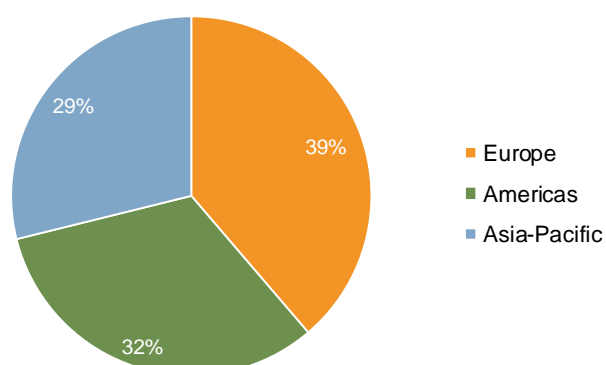
Together with Air Liquide, Praxair and Air Products, Linde is one of the four truly global suppliers of industrial gases. Linde and Air Liquide are both significantly larger on an absolute scale than the two US-based players, including with respect to their 'away from home' market positions, while the American peers are more focused on their domestic market. The consolidated nature of the global industry is shown by the four largest companies having accumulated a total market share of more than 70%, in our view. This concentration has even risen from 2016, following Air Liquide's acquisition of US-based Airgas (USD 5.5bn of revenues in 2015, equivalent to a roughly 7% global market share).

**Figure 1: Industrial gases – estimated global market shares in 2017**



Source: Scope estimates, annual reports

**Figure 2: Gas division's 2017 geographic revenue breakdown**



Source: Linde

**Best-in-class diversification**

Linde's diversification continues to be very strong, in our opinion. This is based on its geographical exposure, with the three largest continents almost evenly represented (2017 figures; see Figure 2), as well as our positive view of its products (bulk, onsite, cylinders and healthcare) and exposure to a broad range of customer industries. Linde has strong market positions in the cylinder segment and in bulk, while healthcare and onsite have benefitted significantly at Air Liquide after its acquisition of Airgas.

**Strong and sustainable operating margins**

Scope regards Linde's operating margins as comfortable and typical for the industry. While its 25-30% EBITDA margins in the gases division are not best-in-class (Praxair has 32%), they nevertheless enable Linde to generate ample and sustainable free cash flow. EBITDA margins have tended towards a very narrow range of 25% and 28% since 2007, due to Linde's resilient and protected business risk profile, and, in particular, due to the mitigating effects of long-term contracts and loyal customers in times of recession. In 2017, the EBITDA margin in the gases division increased slightly to 28.5%, in a year-on-year comparison, which is a considerable achievement in our view, supported by continued favourable macroeconomic developments in Europe as well as the group's cost savings programme LIFT. Furthermore, the strong volume growth in Asia-Pacific, especially in the bulk and onsite segments, combined with a positive price contribution, led to increased EBITDA by about 11% for the region in 2017, compared to 2016. This effect was by and large neutralised by the Americas, which suffered a decline in EBITDA by about 10% in 2017, year-on-year, mainly due to negative trends in the healthcare segment as well as the divestiture of the Specialty Pharma business.

**First quarter 2018: positive fundamentals remaining**

The key industrial gas suppliers in the world were able to generate significantly positive growth rates in the first quarter of 2018. On a comparable basis (excluding currency movements, natural gas price effects and M&A transactions), Linde, Praxair, Air Liquide and Air Products all recorded like-for-like growth rates of between 3% and 7% in the period, in a year-on-year comparison. However, the comparability of growth rates remains restricted by the different products and geographical exposures of the individual companies.

**AA- business risk profile**

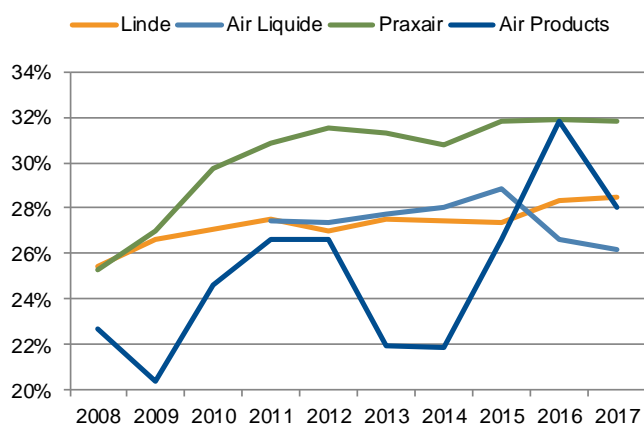
Scope continues to assess Linde's business risk profile at AA-. This includes A+ industry risk and our competitive positioning analysis (AA). The latter considers Linde's strong market shares and excellent diversification, slightly moderated by our view of the group's operating margins which are average for the industry.

**Financial risk profile****Improving credit metrics****Credit metrics**

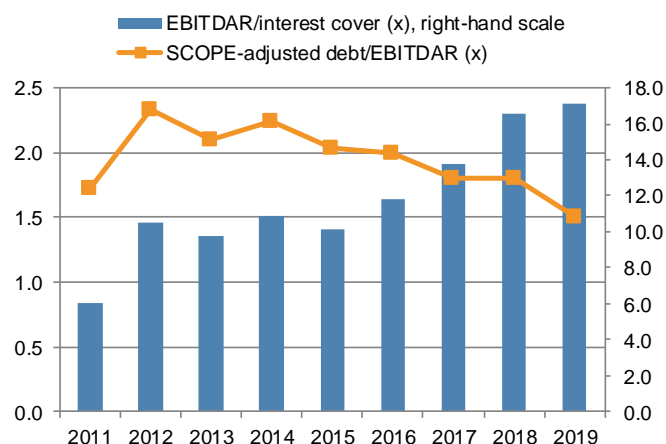
Linde's key credit metrics have been improving since 2012, the year of the Lincare takeover. The transaction led to gross financial debt increasing by about EUR 2.4bn in 2012, supported by a EUR 1.4bn capital increase. Linde's consistent application of free cash has led to deleveraging since then (except for 2014, when it was held back by lower profits and a EUR 300m pension contribution).

Despite only slightly positive revenue and EBITDA trends for Linde in 2017 overall, the group again managed to achieve significant deleveraging. Reported net financial debt could be reduced by about EUR 1bn, compared to 2016, due to robust free cash generation of EUR 1 bn after dividends in 2016, which was up by 35% year-on-year. This was mainly supported by significantly lower capex (net of EUR 267m divestitures).

As a result, key credit metrics again improved slightly over 2016, in line with the ratio guidelines for Linde.

**Figure 3: EBITDA comparison peers**


Source: Annual reports

**Figure 4: Credit metrics continue to improve**


Source: Scope, Linde annual reports

Scope adjusts net debt by operating leases and pensions (50% of unfunded pension obligations, as pension assets cover annual payments significantly in excess of 6x, our threshold for this treatment according to Scope's Corporate Rating Methodology). In 2017, EUR 408m of operating leases and EUR 500m of pension obligations were added to adjusted debt, while we deduct from gross adjusted debt all off-balance sheet cash and marketable securities, except for EUR 200m of cash that is deemed restricted and is therefore not centrally available. We have adjusted for hybrids (50% equity) until 2015, in line with our view that deeply subordinated and permanent instruments with flexible payment mechanisms are equity-like. As Linde paid back its hybrid bond in 2016, this is no longer part of Scope-adjusted debt.

### Liquidity

#### Extremely conservative liquidity management

We view Linde's liquidity management as conservative. This is based on the significant excess cash on balance sheet – far ahead of business requirements – on a sustained basis. At the end of 2017, Linde kept balance sheet liquidity of about EUR 2bn, of which we would qualify only EUR 200m as restricted and therefore not centrally available at all times to potentially pay back debt. In combination with an undrawn committed bank line of EUR 2.5bn and annual free cash flow of more than EUR 1bn after dividends and interest, Linde's available liquidity by far outstrips its short-term financial debt maturities at the end of 2017 of EUR 2billion.

The continued availability of EUR 2.5bn in committed back-up facilities and the group's increasing free cash generation were further factors considered in our analysis.

#### S-1+ short-term rating

Scope's short-term rating is S-1+, based on the facts detailed above and Linde's solid investment grade rating. The rating reflects our perception of the company's protected and cash-generative business model on a sustainable basis. If internal and external sources of liquidity are included, coverage of short-term debt is well above 2x, a level we view as commensurate with the ratings.

#### Financial risk profile rated A-

Scope assesses Linde's financial risk profile at A-. This reflects the level of its financial key metrics as well as our view of the company's sound liquidity profile.

### Supplementary rating drivers

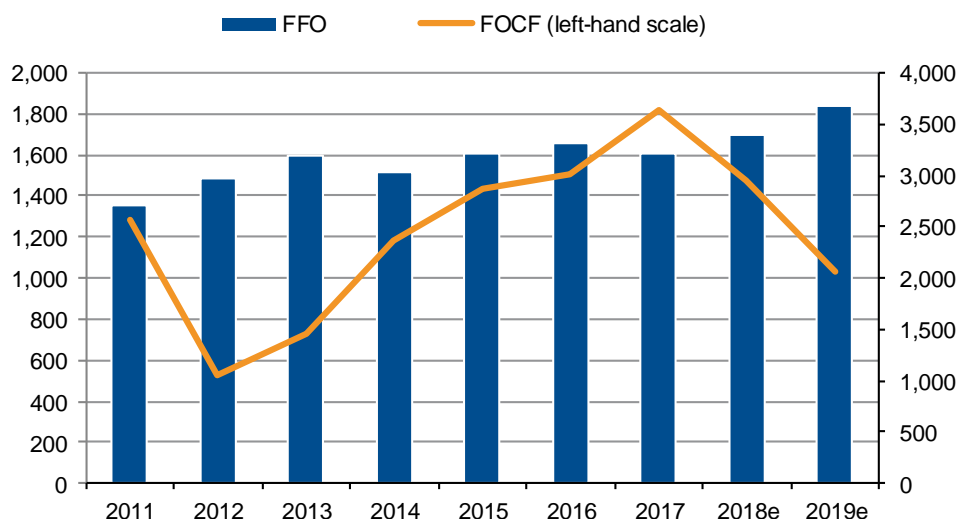
#### Conservative financial policy

Scope regards Linde's financial policy as sound and committed, underscored by its deleveraging trend since 2012. We also take the view that management's official leverage target of 2.5x maximum net financial debt/ EBITDA needs to be seen in context. While this target does translate into a Scope-adjusted leverage of about 2.8x (2015), we



believe that this figure is more theoretical in nature, in order to reflect the Lincare transaction, and that it does not realistically apply to the future. Looking to 2018, we believe the risks for testing Linde's official leverage target are very low as the business is very cash-generative and we consider any acquisitions of the same magnitude as Lincare to be highly unlikely.

**Table 5: Supportive free cash flow generation (EUR m)**



Source: Scope calculations and forecasts, Linde annual reports

## Outlook

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